

CLAIMS:

CA 2004 60 1006

1. A vertically adjustable fixture adapted to be secured to an overhead surface, comprising a base member adapted to be secured to a surface, a flexible elongated member retractable in and extendable out of said base member, a rotatable reel provided in said base member with said elongated member being partly wound around said reel, and a stationary locking mechanism provided in said base member and remotely of said reel, said locking mechanism being adapted in a locked position to lock said elongated member with respect to said base member, with said elongated member being selectively displaceable to disengage said locking mechanism to an unlocked position thereby allowing said elongated member to be displaced relative to said base member by selectively retracting said elongated member into, or withdrawing it from, said base member.
2. A vertically adjustable fixture as defined in Claim 1, wherein said locking mechanism is provided at a lower end of said base member, said elongated member including a series of spaced apart enlargements distributed thereon, said locking mechanism being adapted to engage in said locked position at least one of said enlargements thereby preventing said elongated member from further unwinding from said reel.
3. A vertically adjustable fixture as defined in Claim 2, wherein said enlargements include beads that are substantially equally spaced one after the other.
4. A vertically adjustable fixture as defined in Claim 3, wherein said elongated member comprises a string extending through said beads, said beads being fixedly mounted to said string.
5. A vertically adjustable fixture as defined in Claim 2, wherein said locking member includes a receiving means adapted to receive therein one of said enlargements, said elongated member between said enlargements thereof being slidable in and out of said receiving means when said one of said enlargements is dislodged from said receiving means.

CA 2004/001006

6. A vertically adjustable fixture as defined in Claim 5, wherein said receiving means comprise an angled retention element that opens up onto an opening defined at said lower end of said base member and through which said elongated member extends,

7. A vertically adjustable fixture as defined in Claim 6, wherein said retention element comprises a recess adapted to receive said one of said beads, and a notch joining said opening and a bottom of said recess, said elongated member between said enlargements thereof being slidable in and out of said recess via said notch, wherein in said locked position said one bead is lodged in said recess with gravity forces acting downwardly on said elongated member retaining said one bead in said recess, and wherein, to disengage said one bead from said locking member, said gravity forces are sufficiently opposed for allowing said one bead to be removed from said recess thereby allowing said elongated member to be wound around, or unwound from, said reel for changing an elevation of an article suspended by said elongated member.

8. A vertically adjustable fixture as defined in Claim 6, wherein said retention element comprises a pair of spaced apart fingers defining a gap therebetween which communicates at one end thereof with said opening and which is sufficiently closed at an opposed end thereof, said elongated member between said enlargements thereof being adapted to be received in said gap while said one bead is supported by said fingers; wherein in said locked position said one bead is supported by said fingers gravity forces acting downwardly on said elongated member retaining said one bead on said fingers, and wherein, to disengage said one bead from said locking member, said gravity forces are sufficiently opposed for allowing said one bead to be withdrawn from said fingers thereby allowing said elongated member to be wound around, or unwound from, said reel for changing an elevation of an article suspended by said elongated member.

CA2004/001006

9. A vertically adjustable fixture as defined in Claim 8, wherein said fingers are angled downwardly in a direction away from said opening of said base member.
- 5 10. A vertically adjustable fixture as defined in Claim 1, wherein a shaft is fixedly mounted in said base member, said reel being rotatable about said shaft, a biasing means being provided between said reel and a fixed part of one of said base member and said shaft, said biasing means being adapted to encourage winding of said elongated member around said reel.
- 10 11. A vertically adjustable fixture as defined in Claim 2, wherein a shaft is fixedly mounted in said base member, said reel being rotatable about said shaft, a biasing means being provided between said reel and a fixed part of one of said base member and said shaft, said biasing means being adapted to encourage winding of
- 15 said elongated member around said reel, said biasing means exerting a spring force less than a downward force exerted on said reel by an article suspended from said elongated member, whereby in a suspended position of the article, said locking mechanism retains said one of said enlargements in said locked position, whereas to
- 20 disengage said one bead from said locking member, said downward forces are sufficiently opposed to allow said elongated member to assume said unlocked position thereby allowing said elongated member to be wound around, or unwound from, said reel for changing an elevation of the article.
12. A vertically adjustable fixture as defined in Claim 10, wherein a shaft
- 25 flange is provided on said shaft outwardly of said reel, said reel including a hub for receiving windings of said elongated member therearound, said hub being rotatably mounted around said shaft, first and second reel flanges being provided at opposed ends of said hub for retaining said windings around said hub.
- 30 13. A vertically adjustable fixture as defined in Claim 12, wherein said hub is of frusto-conical shape.

CA 2004/001006

14. A vertically adjustable fixture as defined in Claim 12, wherein a wall extends between said shaft flange and said first reel flange thereby defining a chamber, said biasing means extending in said chamber between said reel and said fixed part.
- 5
15. A vertically adjustable fixture as defined in Claim 14, wherein said biasing means comprises a coiled spring.
16. A vertically adjustable fixture as defined in Claim 14, wherein said shaft includes said fixed part.
- 10
17. A vertically adjustable fixture as defined in Claim 10, wherein an opening is defined at a lower end of said base member, said elongated member extending through said opening, said shaft being off-center with respect to said opening for providing a proper orientation to said elongated member at, and/or adjacent to, said locking member.
- 15
18. A vertically adjustable fixture as defined in Claim 1, wherein a marking is provided on an outside surface of said base member for indicating to a user at least one direction in which said elongated member is to be displaced to move said locking mechanism to said unlocked position.
- 20
19. A vertically adjustable fixture as defined in Claim 10, wherein an opening is defined at a lower end of said base member, said elongated member extending through said opening, said shaft being off-center with respect to said opening for providing a proper orientation to said elongated member at, and/or adjacent to, said locking member.
- 25
20. A vertically adjustable fixture as defined in Claim 19, wherein a marking is provided on an outside surface of said base member for indicating to a user at least one direction in which said elongated member is to be displaced to move said locking mechanism to said unlocked position.
- 30

CA 2004 / 001006

21. A vertically adjustable fixture as defined in Claim 20, wherein said shaft is angled with respect to a vertical plane extending through a portion of said elongated member which extends outwardly of said base member and along said direction.

5

22. A vertically adjustable fixture as defined in any one of Claims 1 to 21, wherein a connector is provided at an end of said elongated member, which is located outside of said base member, said connector being adapted for suspending an item therefrom.

10

23. A vertically adjustable fixture adapted to be secured to an overhead surface, comprising a base member adapted to be secured to a surface, a flexible elongated member retractable in and extendable out of said base member, and a stationary locking mechanism provided in said base member and adapted in a locked position to lock said elongated member with respect to said base member, with said elongated member being selectively displaceable to disengage said locking mechanism to an unlocked position thereby allowing said elongated member to be displaced relative to said base member by selectively retracting said elongated member into, or withdrawing it from, said base member.

20

24. A vertically adjustable fixture adapted to be secured to an overhead surface, comprising a base member adapted to be secured to a surface, and a flexible elongated member retractable in and extendable out of said base member, said base member including a fixed member adapted to be mounted to the surface, a mobile member and a locking member, said locking member being adapted in a locked position thereof to lock said mobile member to said fixed member and being adapted in an unlocked position thereof to allow said mobile to displace relative to said fixed member while causing said elongated member to selectively retract into, or withdraw from, said base member.

30

25. A vertically adjustable fixture as defined in Claim 24, wherein said mobile member comprises a reel capable of rotation within said fixed member, said

CA 2004/1001006

elongated member being wound around said reel, said locking member being adapted to engage or disengage said reel and thus respectively adopting said locked or unlocked position depending on a position of a portion of said elongated member extending below said base member, whereby said portion of said elongated member may be displaced for selectively moving said locking member into, or out of, engagement with said reel thereby respectively preventing or allowing said elongated member to be vertically displaced relative to said base member.

26. A vertically adjustable fixture as defined in Claim 25, wherein said locking member is mounted to said elongated member within said base member.

27. A vertically adjustable fixture as defined in Claim 24, wherein a spring is provided between said fixed member and said mobile member for urging, when in said unlocked position, said elongated member towards a retracted position.

28. A method for changing an elevation of an item suspended from a fixture, comprising the steps of:

(a) providing a fixture having a base adapted to be mounted to an overhead surface, a flexible elongated member retractable in and extendable out of said base, an item attached to said elongated member being in a suspended attitude thereof, said elongated member being in a locked position with respect to said base;

(b) elevating said item and then displacing said elongated member sideways to an unlocked position thereof;

(c) selectively retracting said elongated member in said base or extending said elongated member out of said base until said item is substantially at a desired elevation; and

(d) handling said elongated member while releasing said item such that said elongated member returns to said locked position with said item being in said suspended attitude thereof.

29. A method as defined in Claim 28, wherein a reel is provided in said base with said elongated member being partly wound around said reel, a stationary locking mechanism being provided in said base and remotely of said reel, said

CA 2004/001006

elongated member being engaged with said locking mechanism in said locked position in step a) and disengaging therefrom by slightly elevating said item and then displacing the same sideways in step b).

- 5 30. A method as defined in Claim 28, wherein in step d) said elongated member is displaced sideways to said locking mechanism with said item being then released such that said elongated member engages said locking mechanism and thus assumes said locked position using gravity forces.